

## ABSTRACT

Systems and methods for protecting privacy in transmitting an analog information signal. The present invention combines the information signal with an analog random signal generated by a chaotic circuit and transmits the signal. The received signal is synchronized using a receiving chaotic circuit. The received signal is demodulated using a synchronized replica of the analog random signal. The information signal is recovered since the product of the random signals generated in the transmitter and in the receiver, is unity. Techniques used in the present invention for generating chaos, synchronization, and signal recovery are also disclosed.